

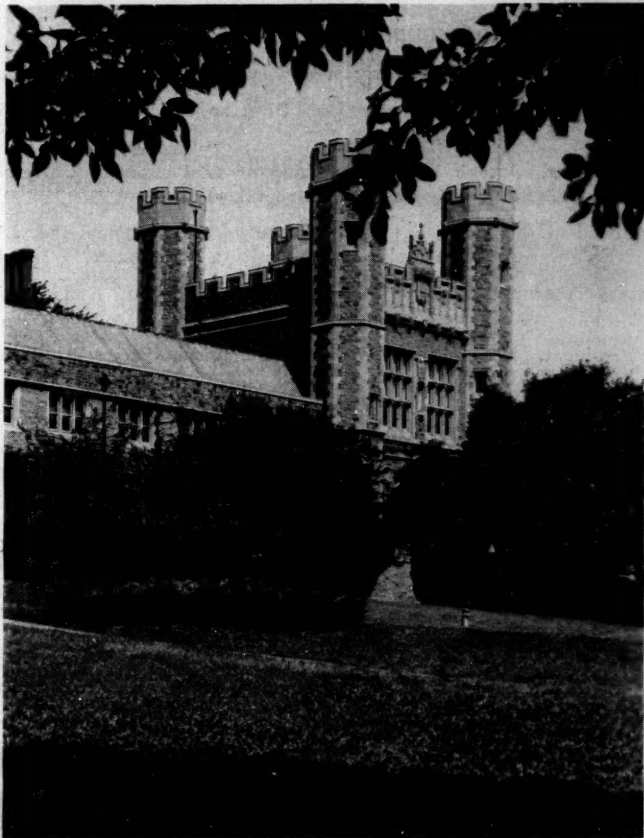
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NOTES & QUOTES . . .

Those Details . . .

All during the warm summer months, the Grasshopper, a lordly creature, lived a life of pleasure and culture, scorning the industrious little Ant, who persisted in stockpiling his anthill.

Toward the end of the summer, however, came a day with a sharp nip in the air. The Grasshopper bethought himself of the oncoming winter, and decided to confer with the Ant about it.

"May I have a moment of your time?" he inquired, interrupting the Ant in his labors.

"Indeed, sir, and thank you," said the Ant, somewhat overawed at the condescension of such a princely creature.

"Winter is coming," said the Grasshopper, "and I feel that we must now consider the problem of the adequacy of our food supply."

The Ant scratched his head with his horny hand. "May I venture to suggest," he replied at last, "that you convert yourself into a Cockroach, go into someone's warm kitchen, and live on the scraps that fall from the table? Then, sir, when summer returns, you can change back into a Grasshopper."

The Grasshopper, overjoyed at the result of the conference, leaped into the air, and took his departure. Suddenly, however, he stopped, turned in his tracks, and went back to the Ant.

"I forgot to tell you," he said, "how much I appreciated your invaluable suggestion. But may I impose upon you by raising still another question? How does one convert oneself into a Cockroach?"

"Sir," answered the Ant, "I have ventured to outline a solution to your problem in broad general terms. I leave it to you as to how

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to handle the small details."

Nine Rules for Success

1. Be quick to praise. People like to praise those who can praise them. Be sincere in doing it.

2. Keep yourself tidy. A slovenly person makes a bad first impression which takes time to overcome.

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3. Interest yourself to a moderate degree in politics. If you are badly governed it will usually be your own fault.

4. Be polite. If you are, others will be polite to you. That makes life a little easier for all concerned.

5. Be helpful. This is the first and most important requisite for success.

6. Be cheerful. There are enough crepe hangers around without you adding to the list.

7. Don't be envious. By far the better way is to assume that what the other fellow does, you can do as well yourself.

8. Don't pity yourself. That gets you nothing except scorn of your fellowmen.

9. Avoid prejudices. The other fellow, be he white or black, Jew, Catholic, or Protestant, is as good as you are.

Personnel Personal

Hypochondriacs

They suffer aloud. Their desks are filled with medicines to cure all human ills, including Yellow Jack. They take so many pills, they rattle when they walk. They could hire out to Cugat. Their conversations are bounded on four sides by symptoms. They try any patent medicines advertised or recommended, especially those with high alcoholic content. They always worry about other employees having something contagious. They die at age 99 from being run over by a beer truck.

Antidote: Sneeze or cough loudly in their presence.

Comedians

When you walk into the office in the morning five minutes late, they sing out, "Good afternoon!"

Twelve times each day they dial your phone number and hang up when you answer. When you take a coffee break they change the pages around in your loose-leaf ledger. They put cheesecake calendars on staid cashiers' desks and fake mice and snakes in stenographers' desk drawers. They have a field day on April 1 and February 14.

Antidote: One good joke at their expense.

Musicians

They whistle and hum off key. They drum "Suwannee River" on their teeth with pencils.

Antidote: Muzzle.

Perfectionist

You.

— Loraine Johnson in
The Office Economist

Colgate's and Williams were in one of those hot battles for leadership that are so beneficial to both the scrappers. Almost simultaneously they abandoned their old packages and came out with new, shiny, attractive, nickel-plated boxes, one with a snap lid and the other with a quick, shallow thread. Colgate's advertisement carried reams of copy explaining the beauties of the new shiny package. words and words and more words. The announcement of the new Williams package was one sentence of copy, with implications of quality that no piling on of words could express so well. It read,

"We couldn't improve the soap, so we improved the box."

One of the tricks of good plain cookin' is to know when to take the pot off the stove. — Abridged from *Printer's Ink*.

Helping Employees Prepare for Retirement

H. G. BRADSHAW

Personnel policies in most industries, and in most educational institutions, provide for the retirement of employees at an age when they can reasonably expect many more years of active and useful life. What can and should be done to help these employees plan for retirement? This article explains how one manufacturing company is attempting to answer this question.

Twenty to twenty-five years have been added to the average life span in the United States during the past hundred years. Medical science has reduced the mortality rate for infants and increased the life expectancy for adults. Most people now 45 can reasonably look forward to celebrating their 70th birthdays. Many will survive much longer. In 1850, men who reached 45 had achieved par for the course.

In the past century, due largely to technological progress, the average work week has been reduced by 30 to 40 hours. People live longer, work less, and have more leisure time than ever before in history. Among the by-products of

these commendable accomplishments are two very significant facts:

1. Although a man spends less time at work, the mental and physical demands of his daily job have become more exacting. His task may not be as strenuous physically but he must move faster, and think more quickly and accurately. He must have a steadier hand and a keener eye, and he must coordinate thought with action more rapidly and precisely.

2. In view of these increased demands on human energy, it is the consensus among those responsible for management policies that workers should relinquish their jobs at a time when they can reasonably expect to enjoy many more years of useful life.

This new attitude toward retirement creates problems, not only for management and the worker, but also for society as a whole. There are now living in the United States more than 14 million people over 65 years of age. If the present trend toward longevity continues, there will be

Mr. Bradshaw is Counselor on Employee Benefits at West Point Manufacturing Company, West Point, Georgia. He was formerly a Trustee of Shorter College in Rome, Georgia, and of Southern Union College in Wadley, Alabama. His company, organized in 1880, manufactures and processes cotton textiles and synthetic fabrics. It has about 12,000 employees in 16 plants. This article developed as a result of the author's participation in a recent program of the Auburn, Alabama, Kiwanis Club.

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from 23 to 25 million of these senior citizens by 1975.

At 65, which is the automatic retirement age in many organizations, life expectancy for the average man is about 13 years; for the average woman it is two or three years longer. Obviously, the fact of retirement at an arbitrary age does not terminate one's ability to enjoy life, or to perform useful services for others. It becomes apparent immediately that the simple practice of retiring people from their customary employment is by no means a complete solution to the economic, social, and political problems caused by progress in medical science and technology and the resulting increase in the span of human life.

What Should Management Do About Retirement?

Does management have a responsibility to attempt to analyze this complex retirement problem and to assist in developing a satisfactory solution? If so, what actions should be taken and when? These are some of the questions for which we, at West Point Manufacturing Company, have been seeking satisfactory answers during the past several years.

In a preliminary survey of the retirement problem, we visited many other companies throughout the country, and studied some of the plans and practices which they have introduced. We also reviewed the research conducted by several educational institutions and found the facilities of the Department of Gerontology at the University of Michigan especially helpful. As a result of our extended study and analysis, we have accumulated many stimulating

ideas and have reached a few basic conclusions which we have tried to apply in introducing pre-retirement planning activities at West Point.

The prospect of compulsory retirement, we believe, is distasteful to almost everyone. Nearly all of us look forward happily to the day when we can "take it easy" and find time to do some of the enjoyable things we want to do but which we never seem to be able to crowd into a busy life. However, most of us do not like to be told that we *must* do this or that, or *stop* doing something which we have been doing and want to continue doing—especially if we are paid to do it, as we are paid for doing our jobs. We just do not like to be told that we *must* retire at a certain age—*any* age.

We at West Point are convinced that many people need and want information about the changes in living conditions which they are likely to experience when they reach retirement age, and that they welcome ideas which will help them to adjust themselves to these new circumstances. At retirement, the routine flow of day-to-day work schedules—broken, perhaps, by an occasional short vacation or some week-end activity such as fishing or attending an athletic event—is suddenly disrupted. The regular job no longer makes its steady and steadying demands.

After retirement, former employees will experience many changes that affect their daily lives. Income will not be the same. Associations with friendly fellow workers will cease or be greatly curtailed. New living arrangements may become necessary. One of the principal reasons

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why a worker dreads approaching retirement, and finds retirement frustrating when it occurs, is because he has not thought about the changes which it will bring in his way of life and has not made specific plans to adjust himself to these changes.

If our analysis of the retirement problem is basically correct, the primary responsibility of management is to create mental and emotional acceptance of the idea of retirement among all employees — and especially among those who are nearing the “normal” retirement age. The various experiences and situations which retirement is likely to produce should be brought to the attention of all who will be affected by the fact of retirement when it occurs. A realistic picture should be presented of the reasons for retirement, the changed circumstances and conditions which accompany retirement, and, especially, the opportunities and advantages which the retired worker can enjoy.

Starting A Pre-Retirement Program

As a result of our study of the retirement problem, preparation for retirement has been incorporated as one of the objectives in the Pre-Retirement Counseling Program of our company. In all counseling activity, our efforts are directed not toward *solving* problems for people, but toward *helping* people to understand and solve their own problems.

In seeking counsel, most people need only the opportunity to talk to a patient and understanding listener. Stating the problem under such circumstances often clarifies the thinking of a per-

plexed person and suggests to him a satisfactory solution. If the person seeking counsel does not appear to find a solution to his own problem, the Counselor may, and probably should, present alternate courses of action for his consideration. However, the decision as to which, if any, of these procedures should be followed should always be made by the person with the problem. It is generally agreed that choice among two or more possible courses of action is essential to long-range satisfaction. It adds zest to what would otherwise be a boring or frustrating existence. One *needs* to make *decisions*.

In our Pre-Retirement Counseling Program, now in effect in 11 divisions of the company having about 8,000 employees, we use two basic methods. One is the personal interview in which assistance is sought by the individual involved. He may come to the Counselor's office at any time to discuss retirement plans or any other personal problems, with or without an appointment; or the Counselor will, on request, confer with any employee at his home. Any subject may be discussed confidentially in these interviews, and the Counselor does not violate this confidence.

The company also provides for group counseling. In accordance with this program, groups of older employees have been invited to attend a series of informal meetings at which various aspects of aging and retiring are discussed. People are *invited*, but not pressured, to attend these meetings. The program is flexible and subject, in part, to the interests and desires of the group. Usually from four to six sessions, each about one hour and a half in

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duration, are required to cover the topics outlined. All groups are small, consisting of from 12 to 20 persons, and they include husbands and wives of participating employees. All are encouraged to ask questions and to join in the discussion.

Meetings are scheduled at convenient hours on the employees' own time. Occasionally, printed or mimeographed materials are distributed. Attendance is not recorded, and no one is asked to submit any kind of a report or comment on the subjects discussed. Light refreshments are served to help develop an informal and friendly atmosphere.

Major topics discussed at this series of meetings are outlined below:

1. *Retirement and financial planning*: Impact and significance of retirement; role of life insurance in financial plans; tax concessions for older people; supplementary income from part-time work and other sources; home ownership; investments; comparison of the cost of living before and after retirement.

2. *Retirement benefits*: Review of benefits provided by the West Point Retirement Plan; social security; old-age and survivor's insurance; life insurance; hospital insurance; budgeting retirement income and expenses. A representative of the Social Security Administration attends this meeting and participates in the discussion.

3. *Health now and in later years*: Health habits for older people; healthful foods; exercise; prevention and treatment of diseases most common in later years; other health questions, including the importance of attitudes or mental health. At this session

a physician discusses physical changes and resulting health problems associated with advancing years. Periodic physical examinations are advised. A college faculty member discusses nutrition and the planning of healthful menus.

4. *Activities for the time of retirement*: Identifying interests and abilities which might become a source of income or pleasure, or both; opportunities to serve others through participation in church activities, community affairs, or welfare work and the personal benefits resulting from such participation. Emphasis is placed on the idea that one should retire to something, not just from something. A representative of the company's Recreation Department discusses the benefits of hobbies and other forms of recreation, and leads some group activity.

5. *Legal aspects of property ownership after retirement*: Legal and tax problems, property transfers, wills. Specific legal problems of individuals are not discussed, but basic principles and pertinent information are presented to help members of the group decide whether they need legal guidance. An attorney attends this session and participates in the discussion.

6. *Family relations after retirement*: Deciding where to live; associations with members of the immediate household and with relatives.

Members of the group are invited to suggest other topics to be considered, and, whenever possible, the Counseling Department assists in arranging such discussions. Many who attend this series of meetings later confer with the Counselor for more detailed consideration of their individual problems.

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Summary and Conclusions

Following are a few of the general conclusions which our company has reached as a result of our limited experience with pre-retirement planning and counseling:

1. Preparation for aging and retirement is largely a matter of conditioning the mind and the emotions to accept the prospect of retirement. Such acceptance can be accomplished through education or training. The primary responsibility of management is to stimulate individual initiative and desire which are essential in making a satisfactory adjustment to the retirement situation.

2. Definite planning for retirement should begin well in advance of the time when, for one reason or another, circumstances or conditions related to the work situation are bound to change for everyone who is gainfully employed. One may decide to retire of his own volition before the normal retirement age; or be forced by injury or illness to discontinue his regular work; or elect to run the full allowable course on the job.

In any of these situations, anticipation and planning are beneficial.

3. Information about planning for retirement, when properly presented, can be of great value to people of all ages — especially to those who are approaching the more mature years.

4. It is our firm conviction that, whether in employment or retirement, only *busy* people can be really happy and contented. Busy minds, busy hands, active bodies — these make for continuing usefulness in life. Busy people are needed and wanted. They are inspiringly helpful to others.

We feel that our thinking and limited accomplishments to date, in helping people plan for retirement, have only begun to suggest a possible solution to a major personnel problem which confronts every employer. Our Pre-Retirement Counseling Program is still subject to evaluation and revision. Perhaps, however, the preceding brief outline of our experience will benefit others whom, we believe, will become increasingly aware of their responsibility to help older workers anticipate and prepare for their coming retirement.

To help determine what colleges and universities are doing about the important personnel problem discussed in this article, please complete the questionnaire enclosed in this issue of THE JOURNAL.

Tomorrow's Jobs with Automation

"Mechanization is progressive; it is not catastrophic. . . . It has been going on for a long time, and it will be going on for a long time. . . . The long-run gains of technological development have tremendous potential for the future."

At the Twelfth Annual Conference of the College and University Personnel Association, a panel of three members of the staff of Purdue University presented their views on the subject of automation or mechanization, as this development may have its effect on college and university workers and their jobs. The panel members were Dr. S. E. Wirt, Director of the Tabulating Division, Dr. Paul V. Johnson, Assistant Professor of Economics in the School of Industrial Management, and Dr. Robert A. Bolda, Assistant Professor of Industrial Psychology in the School of Science, Education and Humanities. The moderator was Dr. Fred Ford, Director of Personnel, University of Pennsylvania.

DR. WIRT

I will speak of mechanization primarily in office procedures, and will discuss three major propositions about office mechanization:

1. That it will not cause any marked decrease in the total number of office workers.
2. That it does require higher and more varied levels of training and performance.
3. That it requires more precise collaboration between departments.

Several new terms have been used loosely to cover the same area

of mechanized office procedures. One of these is "automation," which was originally a technical term for machines and processes that are self-governing. That precise meaning has faded in recent years. About a year ago one survey of literature revealed seven distinct uses of the word "automation". I'm afraid that, catchy as it is, this term is going to become so vague that it becomes meaningless. "Mechanization" is another term; but actually mechanization includes all devices — the stapling machine, the letter opener, or the electronic computer. Another term that has been used professionally quite a bit is "integrated data processing" or "data reduction". The key words are probably *integration* and *data*. However, the professional name in this field, defined by the people who are in it, is Machine Accounting, using "accounting" in the broad sense, whether it be fiscal accounting, property accounting, cost accounting, pupil accounting, or personnel accounting.

At the present time some 300 to 500 colleges are using some kind of large equipment for mechanizing office procedures. The greatest proportion of them are using the equipment for student records. The next largest area of use is in business records, and the third in statistics and research. But that pattern is changing. The

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large computers are being used primarily in research and education and not for doing the routine business of the university. Some public school systems have gone into mechanization. Some of the large high schools are mechanizing their student records.

Mechanization Not Catastrophic

On the first point, as to the future of total office employment, mechanization is progressive; it's not catastrophic. One reason we're not going to feel any major impact on the number of office employees is because we've already had it. The invention of the typewriter and carbon paper were much more serious potential problems with respect to the total quantity of employment than the present trend in mechanization. Because the typewriter was invented, are fewer people employed in the offices now than would have been? Or is it simply that more letters are being written? I suspect the latter is the answer. We're doing things with typewriters that simply would not have been done if typewriters had not been invented. Furthermore, there aren't left very many massive clerical operations that haven't already been mechanized; that is, 100 or 200 people in an office doing the same thing, dividing up a big chore among that many people. I think that automatic vending machines have a much greater possibility of eliminating employment than office mechanization.

Mechanization in general tends toward doing more things that otherwise would not get done. There are three general motives for going into office mechanization. The pressure to save costs is not a very important one because mecha-

nization doesn't often save much in over-all costs. Maybe it could if the mechanization were limited to doing those things which had been done manually. But it is never limited to that. Always, it takes on additional chores, additional services, so that in the end more is being done for perhaps the same amount of money, but not the same being done for less money.

The second motivation is for speed and to handle a large volume of work. That is a more important factor. Reporting income tax returns, social security, and many different government reports of different kinds have forced a great many organizations into mechanization of their records, or at least it has been the trigger which precipitated the change that might have been under consideration for some time. The third factor or motive is the lack of information that is needed but has just been impracticable to obtain by manual methods. That has been the primary motivation, I think, in shifting office work from manual to mechanical methods.

The evolution of tools in the office follows, in a general way, the evolution of hand tools or tools for doing anything. The original tools are individual personal hand tools. For one saw there is one carpenter; for one typewriter there is one typist. The idea was to take the tool to the work with the person. Then came the proliferation of hand tools—not just one wrench per mechanic, but 100 wrenches, and a different gadget or gimmick for doing each job. That doesn't show up too much in the office; we do have some proliferation in kinds of pencils, styluses, paper, etc. Then came power tools. One chain saw goes with one farmer, but it makes a

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considerably more potent farmer out of him. One electric typewriter still goes with one typist; one adding machine ordinarily to one desk. Then came the more complex tools; for instance, in the office, the slave typewriter or the automatic typewriter and the book-keeping machines. Then the further trend is to centralize large and expensive tools and to bring the work to the tools instead of taking the tools to the work. Punch-card machines, electronic computers and all large scale mechanizations, are almost, by necessity, pretty well centralized procedures.

Another aspect of office tools, similar to hand tools, is that in early stages they tend to copy human performance. Somebody makes a machine to do just what the hands can do, only do it better and faster. The methods that are evolved in an office are gradually geared to the kind of tools that are in use. Most offices today are pretty well geared to the typewriter, but some of them with typewriters haven't quite advanced to that stage in their procedure. There are many document forms in offices that are designed for facility in filling them out by hand, with a pencil, rather than being designed for facility in filling them out on a typewriter — for instance, typical Federal forms, 8 x 10 inches in size, with spacing that is nowhere like typewriter spacing. (The Government has a genius for making odd-ball forms.)

The tools change. New tools become available, but the methods don't change as fast as the tools. With mechanization there is this problem: that we are still trying to go through the same procedures as before, but with new tools, while actually the new tools should

have their own procedures. I want to illustrate the shift to procedures that do not parallel human procedures. Consider this sequence of evolution in the simple matter of copying a document. First of all we'd copy a document by a manual typewriter, and the document is copied in much the same sequence in which it was originally written, manually keying one letter at a time. Then consider the same letter copied by a robot typewriter or automatic typewriter. Somebody still has to go through exactly the same procedures to get the first copy, but then the second, third, and fourth copies come automatically. Or we could copy a letter by means of a stencil. The first copy off the stencil was the result of somebody keying, exactly as before, the first copy. But then the second, third, and millionth (if you want) copies can be done automatically.

Then comes a shift in process. Now visualize copying a document by lifting the whole thing off and putting it on another piece of paper in one operation instead of a thousand individual operations. I'm referring, of course, to photocopy processes. If we had insisted that photo-copy processes pick it off one letter at a time, it would have seemed rather foolish. Yet some similar inconsistencies exist in office procedures today.

The future trend is for automatic reading of the information so that it not only can be reproduced, but can be assimilated and reorganized internally, and then included in summary applications, without anyone ever having had to key it or type it. The goal immediately of integrated data processing is to record a name or fact once in a mechanical form, and from then on there need be no

other occasion when anybody has to write it or type it. All other uses of that fact will be made automatically from the first recording.

Another trend in mechanization is to eliminate intermediate documents. We've had to have certain steps to go through to get from here to there. By mechanical means maybe we can make it in one jump and eliminate the intermediate documents. The ultimate is to keep records in an invisible form, not ever writing them; then any facts or summary of facts can be called out instantly—the specific facts that are needed at a specific moment.

Maybe you won't admit this today, but some day I hope you will; that paper in an office is of no value whatever. The efficiency of an office cannot be measured in terms of how much paper it uses. The paper is a nuisance. It is only the information on the paper that is important. If that information could be put to work to accomplish its purposes without being committed to paper, we would be far ahead of the situation we now have. Then machines would not take over the paper work; they would do without it!!

For the same reason it is very awkward to evaluate methods in an office. In a factory the measure of productivity is something objective and concrete that we can count or weigh, but we can't measure paper work in terms of the amount or weight of paper that is consumed or produced in the process. Actually the measurement of efficiency in an office would be the *inverse* of the amount of paper that is being used.

These comments illustrate, in general, that mechanization is a progressive thing which has been going on for a long time, and will

be going on for a long time. There are bumps and hurdles in it, but it is not something catastrophic with which we are about to be faced.

Mechanization Brings Shift In Skills

On the second main point, mechanization causes a shift in the job requirements, and actually increases the range of skills and levels of performance that are necessary. There have been, within the last five years, three different studies that I know of to determine what characteristics and what tests for characteristics might be pertinent to the operation of punch-card machines. All three studies came out with quite similar results. One of the requirements for people in this work is to be able to *see accurately*. It is surprising that there has been so little attention paid to that idea before. One inaccuracy in a mechanical process can cause thousands of errors, because if the machine is started with a basic inaccuracy, it can produce mistakes at the rate of thousands an hour. The Snellen eye test (the letter chart on the wall 20 feet away) is not only of no use, it is of negative use—it picks the wrong people. Measuring visual skills at close distances of 20 inches or 13 inches would be more significant. Two paper tests do tap in some degree this ability to see accurately. One is the typical clerical accuracy test, like the Minnesota clerical test, and another is a spelling test. Not that spelling is involved in this work, but people who are good spellers are people who have learned to see accurately. People who are not good spellers are either people who have not learned to see accurately—or they are illiterate.

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The other skill that is required in this work is the ability to visualize—actually to visualize in symbolic language. That's a weird thing to say; so let's just say "visualize". One sort of test has some relationship with that skill, apparently—tests of spatial perception or spatial relationships.

Another important factor, of course, is reasoning, and that can be tapped by almost any test of reasoning, numerical or otherwise. The reasoning involved in this work is a creative kind and it's usually inductive. In order to arrive at a certain result, we have to visualize backwards what arrangement of factors has to be created in order to produce that result. We start with the result and keep working backwards. But then in checking out the plans, after the plans are completed, we work the other way: if we do this and this, then the result will be so and so. We check it out deductively, but create it inductively. It requires recognition of the fact that every effect is the result always of two causes. There is always an active and a passive situation which causes something. I won't elaborate on that, although it's an interesting point.

At the upper employee levels, for the ability to learn and master new machines as they come into the picture, it is necessary to be able to read technical manuals and to read for meaning; to read to the point, as though one had been instructed by a competent expert; to learn from reading. For the lower employee levels, instructions are more frequently verbal. I wish there were some way to measure a person's span of comprehension for verbal instructions. I have one operator in mind whose span of comprehension is three

items. (I suspect that is about average.) If the instructions involve three particular points, the job will be done correctly from verbal instructions. If the instructions involve four points, it is likely to misfire; five points, and it is sure to misfire. There is a span of "density of ideas" or scope of total items that one can remember from verbal instructions.

At the upper levels of this work, in fact all through it, there are three different levels of language and language activity. At level A the language is English, but it is an English jargon. If we are talking with the accounting department, it is accounting jargon; if we are talking with the personnel department, it is the jargon of personnel. It is the jargon of the department that is to be served by a particular operation of mechanized equipment, trying to describe in that language what is to be accomplished. The next level is B, and that is the language of methods and procedures, to a certain extent a language of symbols. It is a map or chart from here to there. We've got this; we want to get to there; these are the steps we must go through. There are some rather interesting conventional methods of representing procedures.

The third language, C, is actually the language of instructions to a particular machine in order that it may accomplish its particular steps, its particular parts of the total integrated process. There is a different language for each machine, or let's say a different dialect. The languages look very similar and are all of several families, but there are many different dialects which have to be learned. The translation between the different levels of language is

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the key to productive performance in machine accounting.

The range of levels of job performance can be defined, in part, by which languages it deals with. As a rule the most basic or elementary position is a key punch operator, which involves something like typing, with an alphabetic keyboard, but a rather sluggish keyboard compared to an electric typewriter; it is more like a teletype machine. And a numeric keyboard, a three-finger keyboard, like the three-finger adding machine only upside down. The requirement in key punching, with respect to language, is to translate a rather simple lingo of method into a relatively limited machine lingo.

The junior machine operator is usually considered a grade higher, although the difference is actually very slight, in quality of person required. To a certain extent the junior machine operator accomplishes things by pushing buttons by rote, but also the junior operator has to be able to modify instructions to the simpler machines, changing from one operation to another, and translating from language B methods back into language C for minor kinds of problems. The senior machine operator has to plan and execute operations on a much broader scale, translating sometimes from objectives stated in A into procedures in B, and frequently into machine languages in C. The supervisory level has to create the new plans in language A with an eye to B and C. There is no sense in promising the accounting department that you can do this and that unless you know enough about languages B and C to feel pretty sure that it can be translated into those languages and

accomplished.

At the supervisory level there is opportunity for some specialization in general areas. This is particularly true with the large computers. One function of the administrative staff is liaison with the other departments, working out the specifications of what is to be done for them. Another is the area of methods and procedures. A third is actually "programming" the complex machines, or instructing machines. And the fourth, of course, is with the personnel supervision. Frequently the question arises out of these several specialties — which is the way up? Which is the area to look in to find future management material? The question, of course, is never completely answered.

The trend at the upper levels, which is filtering down toward the intermediate levels, is one of professional concepts and professional behavior rather than one of a craft and union behavior. In the whole area of automation there is a fraternal feeling, much like the feeling among people in communications or in transportation. There are many rather universal procedures for handling cards or tapes and for programming machines. Everybody understands everybody else's problems. There is a certain amount of excitement which is attractive; crash programs are quite frequent; irregular hours; obviously there is "togetherness" and teamwork. It is an engrossing field. From the top supervisory levels few machine accountants are seeking transfer or promotion out of the field.

As to training and training facilities, the companies that make the machines provide schools for machine operators, with a course for each machine, from a few days

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to many weeks depending on the machine. The manufacturers also provide seminars for executives of different stripes and denominations. The professional associations within the field provide some education; but still by far the biggest source of training is on the job from another operator or supervisor.

Mechanization Requires Collaboration

These general comments should make it rather obvious why, in my third main point, mechanization is going to require a more precise kind of collaboration among and between departments — inter-departmental collaboration because the procedures in a centralized machine accounting set-up cross departmental lines. Collaboration also because the schedules for doing the work in machine accounting are in terms of hours, not in terms of days. The raw material has to come from some other department; the final result goes back to another department. The interplay on the scheduling is a critical matter, and it takes some real scheduling at times to get things done.

Then the departmental people who are being served by these monsters have to be willing to see modifications in the procedures, to abandon procedures they themselves may have designed so that the procedures can be revamped to get the best possible results from the machine, and to have a procedure which is the best possible mechanical procedure, rather than a mechanical procedure which parallels the best manual procedure.

Top management has to recognize that these central operations are, naturally, a service bureau.

Some of their work is unexpected, particularly in the area of student records. Not nearly all of the work can be scheduled in advance. Much of it is unexpected or quick jobs — requests for quick information. There must be enough machinery and enough people to provide extra stand-by facilities, in order to care for unexpected problems. Furthermore, there has to be that leeway or slack in the schedule to allow the people time to think, to review, and to plan how to improve the operations and to add new services. There are, unfortunately, installations in colleges where they know they could work out a quicker way of getting a job done, if they could just get time free to work it out. But getting the job done each day takes so much time that there isn't time left to figure out how to do it in less time.

Possibly these comments have been too technical, resulting in a viewpoint that can't see the forest on account of the trees. So much for the trees. Now we'll turn the forum over to others who can show you the forest.

DR. JOHNSON

Three or four years ago the Industrial Relations Research Association held a meeting — one of their annual meetings — at which a panel discussion was devoted to the subject of automation, productivity increases, and their implications. The title of one of the papers presented was "Automation: A New Dimension to Old Problems". I have been intrigued by that title ever since — much more, in some ways, than by the content of the paper itself. First, this title suggests that the problems of automation are not

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really new problems at all, but are problems that have been common for at least a century and a half, and in a broad sense, I suppose for many centuries. We experienced in American industry, as already indicated, a development from hand methods to machine methods during the nineteenth century. Following World War I, large scale mass production became common, and this had some counterpart in office work. Most recently we have been using computers, various recording devices, and in some cases, feedback mechanisms; and this we call automation. But all of this is really a continuing stream of what the economist likes to call technological development.

The second reason the title, "Automation: A New Dimension to Old Problems," intrigues me is that it emphasizes the problem aspect, and I think this is precisely what most of the conferences and discussions on automation have done. Now I would not for a moment suggest that there are no problems connected with automation, or that we should give no thought to such problems, but it seems to me that sometimes we can get so concerned with the problems that we forego thinking about the fruits of automation. So I would like to take a portion of my time to review some things you already recognize — the tremendous fruits of automation. Now what I am really going to be talking about, I suppose, are the fruits of technological development, a most recent phase of which is automation.

Higher Living Standards

Let us consider this matter from the standpoint of society first. Better technology has led, as you

are quite aware, to much higher living standards in the United States today than in former times. Over the past seventy-five years there has been an increase of something like four times in the total amount of goods and services produced — what the economist calls the gross national product — even if we adjust for changes in price levels and population increases. This is a constant dollar per capita figure if you want to think of it in technical terms. There has been, during the same past seventy-five years, a threefold increase in disposable personal income, again on a constant dollar per capita basis. The reason, of course, that this is a threefold rather than a fourfold increase is because services of government — that is, at least, the big item here — have increased, and some of the increased output of the economy is not available for personal spending, because it goes to pay for government services. During this same period, as you know, the typical work week has been reduced from something like sixty-two or sixty-three hours per week on the average in 1880 to a figure approaching forty hours in most industries today. I suspect that we approach this more closely in the clerical and office field than in some other areas.

Now all of this has been possible, really, because of technological developments. When you discount price changes and take account of population growth, you still cannot explain this progress, unless you recognize that better tools and equipment and — what is more important — better techniques of utilizing human beings who use these tools and equipment have actually made the individual worker much more productive.

Since the period around 1880, there has actually been about a *fivefold* increase in the average output per man hour. This represents a very large gain and is what actually accounts for the improvements we have just noted.

Changes In Labor Force

Changes in the labor force have resulted, and more changes can be expected in the future, as already suggested by Dr. Wirt. For example, there has been a great expansion in the clerical field and in other white collar areas of activity. There are at present more people in the United States working in service industries than in the goods-producing industries, such as manufacturing, construction, agriculture, and mining. Prior to four or five years ago, just the opposite was true, and, of course, twenty, thirty, or forty years ago, there were far more workers in such industries as compared to the service industries.

In terms of occupations, the clerical field has expanded very rapidly. As a matter of fact, in the decade from 1940 to 1950 — note, only a ten-year period — there was approximately a 50% increase in the number of stenographers and typists. This, again, in spite of the fact that many technological developments were being used on a much wider scale. Developments, such as various kinds of equipment to reproduce letters, duplicating machines, and automatic recording devices, were coming into play in this decade. It seems to me that this kind of a change will continue. More tasks will be performed in the clerical area, so that we can expect that there will be an increase in the number of jobs here just as there

has been in the past. (I would, however, be inclined to agree with Dr. Wirt that the big upsurge has already taken place.) The increases in the future will probably be somewhat less rapid than in the past, but certainly an over-all decrease of workers in this area seems unlikely.

These changes have many implications, of course. One of the implications — again, this has already been referred to — is that the nature of many jobs is changing. There will be less routine work — such operations as hand sorting. There will be requirements for more people who have greater ranges of skills, and this means, I suppose, an upgrading of job requirements. This ought to make more interesting jobs, and the fact that people are staying in some of the top-level positions in this field, as Dr. Wirt noted, is indicative of the fact that these are challenging and interesting jobs. These changes will probably have a long-run effect of raising salaries in office employment. One recent study in an insurance company, which converted a department with about 500 workers to a rather extensive use of automatic equipment (including a large calculator), suggested that the results could be summarized thus: the number of employees went down 25% in this particular department, while, at the same time, the average weekly salary went up 33%. Thus there was a reduction in the total number of jobs, but an upgrading in the jobs that did remain, and proportional salary increases. There is also a whole new field of servicing being developed — service and maintenance of the new equipment. However, I feel we should not take time to explore

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this development today.

At the college and university level, Dr. Wirt has done an excellent job of describing the situation, and I am not going to repeat in detail the things he has been saying. He has minimized cost reduction as a major impetus to automation and technological development here and stressed the fact that we get greater speed, more flexibility, and more potential. Now these are certainly the important gains in this area. We might take just a few moments to note some of the reasons why these gains are so important.

Increased Enrollments

If we can believe the figures and predictions that have been publicized, the number of students is going to increase greatly in the years to come, putting many pressures on our colleges and universities. We certainly want to see the educational quality kept at its present level. We, in fact, would like to see the educational quality improved, and we think there is room for improvement. This means that we will have to have greater teaching efficiency, among other things, simply because we cannot hope to increase the number of teachers at the college and university level in the same proportion that the number of students will increase. I do not want to digress into the problem of teacher shortages. I think this is a fairly established point. But greater teaching efficiency will mean that better teaching techniques must be sought, and—what is very important—there will have to be additional help of a clerical nature furnished to the teaching profession. Some of this is being done already in terms of

grading processes, record keeping, and making data available for the use of the instructional staffs in counseling and handling of routine duties. I feel that this kind of thing will have to grow if teaching efficiency is to be improved to handle the upward surge in enrollments. Automation at the clerical and office level, it seems to me, then, will make it possible for this growth to take place.

As personnel people there are two things that you ought to be concerned about and be working for. I suspect that most of you already are. One is a better use of people—and I stress people here because, after all, people are very important—a better use of people and equipment to do the present job. This might be called improving administrative efficiency. Secondly, the development of new ways to do not only a better administrative job, but also to help improve teaching efficiency, is important. I believe that the teaching staffs of colleges are going to need, and to depend upon, this kind of help. They are going to need suggestions from people in the administrative area, and as personnel workers, you need not only to try and work for this yourselves, but you must try to stimulate within the employees you supervise this kind of an outlook.

The problem of increasing enrollment is a general one, of course. It is not specifically a problem of automation, but one that, I think, automation will help us solve in the years to come. What about the problems associated with automation? Dr. Wirt is much better qualified than I to discuss the technical problems of office automation. There are, however, two other problems of office automation that usually come up in

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any discussion of automation, whether it is in terms of office or of production automation. Let me mention these briefly. One is the problem of displacement of workers; the other is the problem of training—and the staffing problem that goes along with it.

Displacement of Workers

It seems to me that in the college and university field we have a very considerable advantage in that displacement does not seem to be a very serious problem. There are two reasons for this. One of them has already been suggested in terms of the growth that we are experiencing. This growth is a twofold kind of thing. Since student enrollments are increasing and are expected to increase in the future, there will be a greater volume of administrative work to be accomplished. Furthermore, the rendering of additional types of services will certainly increase the demand on administrative staffs. Growth, then, is one of the factors that will minimize any serious problems of displacement. The other factor that is important at the college and university level is the fact that there is relatively high labor turnover—at least this is typical in many schools.

Strangely enough, this is one instance where a high labor turnover may have some advantages. If you are changing processes or procedures and find that you need fewer workers in a particular department or division you may simply refrain from replacing the people who are normally likely to be leaving the service of the college or university. Almost all of the successful attempts at introduction of automation—from manufacturing organizations to

the insurance company that I cited a moment ago—have involved a timing of these changes over a long-run period so that normal turnover was used to avoid worker displacement as much as possible. Thus it seems to me that these high turnover rates, plus the expected growth in administrative services, mean that there will be few serious displacement problems to be considered here.

Problem of Training

The training problem, I think, is a little more serious. Using these newer techniques and these newer kinds of equipment, can colleges obtain an adequate administrative staff? Can colleges then keep an adequate staff? The fact that training will have to be done on the job in many cases means that there will be some difficulty, it would seem, in justifying training time and expense for certain of the employees that are involved in these high turnover rates. Now I presume that it is a fairly general practice, as it is in the universities with which I have had contact, to use as employees a substantial number of student wives—persons who will be with the university or college for two, three, or four years. To spend a considerable amount of time and money training these people may not always pay adequate dividends. This may require a shift in the mix of employees that are to be utilized; perhaps it will involve a shift to the more permanent kind of personnel. One of the problems you people ought to be thinking about in terms of long-range planning is just what kind of an over-all employment and training policy should be followed. How far can one go toward providing employ-

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ment in this area and still keep a core of long-term employees on which sufficient time, effort, and money can be spent to give them the proper training?

I do not have the exact answer to this training problem. I do not know how much of a change this will require in the individual institution, but it seems to me that the problem will arise. Part of the answer may be the training of the longer-term workers and part of the problem, then, will be deciding who these people are. Training of older workers may become more important, and the approach to this kind of training is frequently quite different from that useful with relatively younger workers. Dr. Bolda will probably have something more to say about training, so I will not speculate further.

Summary

To summarize, let me note that I have not been attempting to give you answers here, but to stimulate your own thinking. I would like to emphasize again, however, that the long-run gains of technological development—including the latest name for this, automation—certainly have tremendous potential, and our history as a society has evidenced such gains in the past and will bear evidence to them in the future. At the college and university level, improved efficiency is certainly very greatly needed. So the problem, essentially, is one of meeting the needs of the university and college in such a way that we can get our share, if you like, of these gains in productivity—so that the fruits of automation can come not only to society, in general, but to all of us in college and university work. It seems to me that such institu-

tions certainly have the resources that ought to be capable of being brought to bear on these problems—problems that seem to be somewhat overemphasized at times—and that we ought to be able to get our share of the fruits of automation.

DR. BOLDA

My purpose in this panel presentation is to discuss some of the kinds of problems that I anticipate university personnel administration people might encounter in connection with automation. I hope that repetition will not be taken as an instance of redundancy as much as of emphasis. I will attempt to make two different points in the remainder of this conversation. First, I want to review some of the difficulties associated with the *introduction of automation* into your organization; and for the most part, here, I'll be talking about clerical automation. The second thing I want to do is to anticipate some of the *consequences of industrial automation* on university personnel administration. I think some of these are worth talking about.

Introduction of Automation

First of all, what about the *introduction of automation* into an industry? What kind of a problem can the personnel administrator anticipate? The first thing that occurs to me is the whole business of *employee motivation*. We have enough experience behind us in psychological science now that we can predict pretty well that when you try to introduce major innovations to large groups of employees, you frequently run into difficulty. One of the sources of these difficul-

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ties is what psychologists have come to call *group dynamics*. People working together in a group tend to adopt group standards, allegiances, and goals. They produce out of their allegiance to the group. When you destroy the group, as you are almost certain to do in an automated innovation, I think a good deal of the personal incentive in work is taken out. I suspect that one of the marks of successful introduction of automation into an organization will be in the skill with which management and administration can reconstitute work groups.

Work Measurement

The second problem that I think the university personnel administrator might face with the introduction of automation into his organization is in the area of work measurement. One of the big problems that a certain management has had in introducing automation in an office was in trying to identify which operations were going to be eliminated, which ones would take their place, and more important, how much employee time would be saved and reallocated to new operations. I think here that a lot of our work in the area of job description, job analysis, etc., will be of tremendous importance. This is another place, I think, where the university personnel administrator can make a contribution to the introduction of automation.

Filling Of New Jobs

The third kind of difficulty associated with introduction (I believe both speakers have commented on this) is in the filling of new jobs. I think we're getting

to the point now, with the introduction of high mechanization, where specialists and technicians are going to be required. The possibilities for training people like this from within an organization, I suspect, are not too good. It may well be that recruitment will become a bigger problem for the personnel administrator in the university. Whether you go outside or inside to fill jobs is dependent upon the situation. If one has to go outside, then I think recruitment will become a big job.

Re-placement And Re-tention

The fourth kind of problem that I think the university personnel people will encounter is quite a large one in connection with replacing (that's got a hyphen in it) and re-training folks who have been displaced from old jobs. It is my understanding that group training activities in the clerical field in most universities are not heavily practiced — not as heavily practiced as in some industries in our communities. To the extent that mass re-placing and re-training occurs, you can expect that your organization is going to have to get into something like this; the development of training programs may become a somewhat larger part of your job than it has been in the past.

In this business of re-placing, I think we can profit from industry's experience. We have a series of studies under way in which we are attempting to identify job clusters: to find jobs that are sufficiently similar to one another with respect to the kind of abilities that the employee has to have. What we want to do is to group all such jobs together, identify them in groups and say that a

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person who holds job A in this cluster is also likely to work out on B, because the patterns of abilities required on both are similar. The process of finding job clusters is a large task. In proportion as your organization is large, I think that this may be something that is required. In retraining and re-placing both, I think selection by tests might become just a little more of a problem than it has been in the past. We may find new jobs for which we have no criterion standards. We have no way of knowing whether a test will be useful for predicting performance on this job or not. Again, I think we can take a page out of industry's experience in this sort of thing.

There are under way at this time several studies in what we psychologists have come to call *synthetic validity*, in which we are trying to predict performance on specific elements of a job from knowledge of test results, rather than from over-all performance on the jobs. We find that we can get tests that predict particular elements; therefore knowing the elements of a new job, we can get ourselves a group of tests that might be predictive. This is why it is called synthetic.

Supervisory Staffing

Finally, the last point that ought to be kept in the mind of the university personnel administrator deals with supervision. When you go into a new installation of this kind, supervisory staffing is a big job. I think that we're going to find somewhat more supervisory training going on in universities. Now whether this is a direct result of automation, or whether it is a concomitant of some of the

other consequences of automation, I think we can argue about it at some length. That it is going to occur is, I think, almost certain. The same goes for supervisory selection.

The common element in all the problems dealing with the installation of automation is participation by the personnel administrator in the planning stage — participation at an administrative level. To the extent that the personnel administrator can contribute to planning and installation, he will be performing his function successfully.

It is very easy to talk about automation in the university picture as being restricted to the clerical field. I think almost all universities have service staffs, however. You have skilled, and some unskilled, people working for you. The possibilities for automating these kinds of jobs are minimal certainly, and we all recognize that. I think that whether or not your organization gets into automation makes not quite so much difference as you might think. The fact that industry automates might have some consequences for your operation. I'd like to outline very briefly three things that I think might happen to your organization as a result of someone else's automating.

Change In Labor Force

First, I think the labor force will change. It will change in constitution. A lot of experts predict that on a short run basis there might be a loosening up of the labor force. Now there are a lot of things that come in here: the recession that we have "lived through", the war babies of the

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second World War, and this sort of thing; a lot of issues might come in to "muddy" the puddle. But the important thing is that we can predict the labor force is going to change. If it loosens, as a lot of people say it will, I suspect that it will loosen in the direction of putting more unskilled people on the job market. I think this has some consequences for the personnel administrator. I think his job will become a problem of selection and not so much of placement, with these kinds of employees.

By-Polarity Of Skills

Secondly, I think that the fact that industry introduces automation will have another effect. That is, we will run into what some of us have come to call a by-polarity of skills. Presently we have, let's say, many unskilled people in the work force, 2X many semi-skilled, and X, many highly-skilled. I think that, as automation becomes more and more popular in industries, we will find that this distribution will change. We will have more and more unskilled people, fewer semi-skilled, and more skilled. The proportion here is probably radical. I think the fact that this will occur, that this semi-skilled group will shrink somewhat, has some important consequences. It is my understanding that a good many universities attempt to hire and place semi-skilled people for purposes of versatility. There will be fewer and fewer of these people available. It may not happen five years from now, or eight years, but it certainly will happen. This emphasizes placement in the personnel administration activity. With regard to unskilled people it will be a job

of selection; with regard to these other kinds of people, it will be a job of placement.

Change In Working Conditions

Finally, I think that industry's use of automation will have another effect and perhaps a somewhat more subtle thing. That is that many of the working conditions associated with jobs in our community will change. I'm thinking here primarily of industry's and labor's emphasis on a shorter work week. This is coming. Maybe not next year; maybe not three years from now, but it will be here. Whether this is a consequence of automation, or a concomitant of automation, is debatable. The important point is that the shorter work week will arrive. We can already see some of the effects of this on certain university organizations. If it comes in the community, I think you can also predict that the personnel administration of the university will be under pressure to conform.

Summary

By way of a very quick summary, I feel that the introduction of automation into your own organization and into other people's organizations is going to involve at least four changes. First, you will be called into supervisory selection and training much more so than in the past. Secondly, you will also be actively involved in initial planning at an administrative level. I'm thinking here primarily of work measurement. Third, personnel placement will become more important than personnel selection, at least in the service types of jobs. Finally, we can anticipate

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certain pressures from the community with regard to working conditions: the shorter work week.

One of the points I tried to make here is that introducing clerical automation will certainly have some effects, some things we've got to anticipate. Whether or not our clerical organizations automate, however, does not mean that our jobs will be unaffected. I think that industry's use of automation is going to have some effect on us. In closing, I think that the administration will be called upon to participate at the planning stage. The skilled administrator will be prepared for some of the effects I have mentioned here.

Questions And Answers Following Panel Presentation

Question: Dr. Bolda, you made a statement that personnel placement is going to become more important than personnel selection. Will you expand on that?

Dr. Bolda: What I had in mind here was a shift that I predict we will see in the semi-skilled classifications. There will be fewer and fewer of these people available. When one walks into the employment office, the chances will be about eight in ten that we want him. The question is, where will

we put him? How can we best make use of this person? Now the opposite sort of thing will happen with unskilled, certainly. As there are more and more of these people, our problem will be one of selection rather than of placement. There will be enough people so that we can be reasonably selective, but when semi-skilled applicants come in the door, we've got to make pretty good use of them.

Question: Could you enlarge upon the use of *synthetic validity*?

Dr. Bolda: Let me give an example of how it is used. In the aircraft industry employees will be working on one job today, and that job will be out tomorrow. You've got to re-staff a third job the week after that. How are you going to predict success on this job? Well, if we can get sufficient top management raters or foremen raters to identify the critical elements, the job elements, the things a man does with his hands and his mind on this job, we've got the battle half won. In hold-out or prior-type validation studies, we can investigate the relationship between test scores and the occurrence of these elements. It happens that we are taking the cluster approach. We are trying to do this in job families. But the principle is equally as applicable in cluster situations as it is in individual jobs.

Academic Respectability for Personnel Administration

HARRY J. PARKER

Should a Personnel Director and a Personnel Department have status in a college or university administrative hierarchy? Here is one answer to the question.

It has become a tenable fact that colleges and universities are going to experience increased enrollments in the near future. With these student increases, an attendant faculty and nonacademic personnel expansion is already a realistic anticipation.

The matter of quality or type of student body has been relatively well systematized by proven selection procedures. Specialists in admissions offices, test experts, and counseling center operations insure conformity to the criteria of academically qualified students. While certain types of college and university faculty are in short supply, rigorous selection principles continue to promote high quality in teaching personnel. Here, faculty boards, departmental chairmen, and associations related to the particular discipline all mediate the problem of faculty selection. In general, the areas of student and faculty selection can be viewed as well established, rather automatic educational practices.

But what of the individual who is responsible for selection of the nonacademic personnel of a large college or university? At present,

this appears to be the sensitive area and an issue which needs drastic clarification in the minds of administrators of higher education and personnel people.

The paramount issue today is whether or not a Personnel Director and that department should have status in a college or university administrative hierarchy. A cursory examination of the large universities in the midwestern area found that most administrators and faculty do not envisage the Personnel Director's qualifications, or the Personnel Department, as much more than an employment office, or a place where records of insurance, sick benefits, vacation data, et. al. repose. Further, it was revealed that the qualifications of the Personnel Director, in terms of formal college work and experiential background, were appalling when compared with their industrial or business counterparts. This signals to a great extent the prestige enjoyed by the Personnel Director in those schools, and reveals the administrative philosophy as to the value of a Personnel Department within the institutions. For example, one prestigious university elevated a man to Personnel Director who had several years of residence hall director experience, and a B.A. de-

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gree in Speech as the only obvious qualifications for such an important post.

Looking to business and industrial Personnel Departments, however, one finds well trained people with considerable psychological background and with appropriate formal degree training, often masters degrees and beyond. This training easily surpasses the educational attainment of the working force of an organization; hence the Personnel Director and his staff usually enjoy a responsible, as well as "prestigious" position. In many instances, the Personnel Director enters into executive and policy decisions, and in terms of relations to the administrative hierarchy, he will often be an integral and well-accepted member of the company. A mere glance at the academic institution finds no such condition.

One of the most obvious distinctions is the level of educational competence, and to some extent, the experience of Personnel Directors, both acting as powerful deterrents to academic faculty and administration acceptance. Probing the matter of college and university Personnel Director qualifications still further, this same investigation revealed that they are generally less well-equipped in psychological techniques than advanced undergraduates in education and psychology. Too often, the formal training approximates several basic business and personnel courses. Also, there seems to be a marked absence of knowledge or sophistication in such critical areas as: Personality Theory, Psychological Testing, Job Evaluation, Interviewing Skill, and Counseling Techniques.

Jenkins,¹ taking a deleterious view, suggested that criteria for Personnel Directors should not be

a "list of education or experience requirements" but rather "a statement of areas of personnel administration with which Personnel Directors should be familiar." What Jenkins defines as "familiar" is anybody's guess.

This position and the underlying thinking is wholly inconsistent with the need to elevate the college and university Personnel Director to professional status. In addition, it seems to be fallacious to believe that mere familiarity with personnel administration and all that it entails can supercede rigorous multi-disciplined formal training and experience. Jenkins' position is rather typical among personnel workers, and is one which inveighs against professional progress and stature. If allowed to prevail, it will immobilize the burgeoning educational institutions of higher learning and entrench the colorless status of college and university Personnel Directors and their work.

Today, when colleges and universities abound with persons in administrative positions having the Doctoral degree, this places the Personnel Director outside the perimeter of academic respectability. Where the Personnel Director has educational qualifications similar to the general faculty and administrative officers, it is simple to visualize the character of communication, rapprochement, and communality of feeling which can result.

What is advocated here is that Personnel Directors in large college and university settings should hold the Doctoral degree, with specified training in Counseling

1. Paul J. Jenkins, "Our Challenge for the 60's," *CUPA Journal*, Vol. 9, No. 3, (March, 1958) p. 9.

(Continued on Page 27)

The Validity of the Interview

WILLIAM E. SCOTT

How much emphasis should be placed on the interview in the selection process? How can this selection technique be objectively measured or validated? Purdue University has a plan.

The interview continues to be the principal instrument for selection and placement in industry, as well as in colleges and universities. Even in those organizations which have a well-developed testing program, an applicant is seldom hired for any position until he has been interviewed by at least one management representative, and in most of these cases, the results of the interview are weighed far more heavily in the final decision than any of the tests.

One would infer from the universal popularity of the interview that empirical studies have shown it to be a sound selection technique. This inference, however, is not entirely substantiated in the literature. The few reported studies of interview validity have shown

widely varying results including some instances in which the interview was found to be nearly useless as a selection technique.¹ Such findings give emphasis to the criticism that one of the frequent errors in interviewing, as in many other personnel procedures, is the assumption that it is a thoroughly successful technique which needs no checking. So much faith is placed on the interview that objective analysis of its results are often felt unnecessary.

Most interviewers, of course, are never so confident that they make no attempts to evaluate their judgments. Goaded by their own insecurity and a sincere interest in improvement, they will establish an informal follow-up procedure which usually consists of discussions with new employees and their supervisors, a review of termination reports, and when available, a perusal of exit interview information. Nevertheless, the criticism is well taken. We cannot be assured of our interview validity nor continue to gain wide acceptance of our services on the basis of casual evaluations and intuitive judgments. They must be fortified by rigid analysis and statistical fact.

The only consistent finding in

Mr. Scott is Personnel Assistant at Purdue University. This article is a report of a study which he has just completed on that campus. He writes: "We are quite pleased that an objective evaluation of our interviewing method has proven it to be a valid selection technique. At the same time, I am extremely cautious in generalizing the results of this study to other interviewing situations. The interview consists of a specific individual making decisions about applicants in a specific set of circumstances, and using a specific interview method. Change any of these, particularly the interviewer or the method, and the validity is subject to change in an unknown direction. This is one of the reasons why I feel we need more validation studies conducted in the most objective manner possible."

1. R. Wagner, "The Employment Interview: A Critical Preview," *Personnel Psychology*, Vol. 2, (1949) pp. 17-46.

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research studies of the interview was that the systematic interview was superior to the casual, loosely organized one which some critics believe is still in widespread use. On the basis of this information, a systematic interview method has been developed at Purdue. It is not a rigid plan which specifies standardized questions to be asked of all applicants in exactly the same way. Rather, the specific questions to be asked are left to the discretion of the interviewer and are developed out of the interview situation. It does provide a general guide for the collection of information which can be elicited in an interview and which is thought to be related to job success. After the interview is terminated, the interviewer is required to use a rating key to rate the applicant on such factors as Appearance, Motivation, General Educational Development, and Physical Capacity. The interviewer then notes specific campus jobs for which the applicant appears to be qualified and assigns an over-all rating as follows:

- 1 - Outstanding Applicant
- 2 - Above Average Applicant
- 3 - Average Applicant
- 4 - Below Average Applicant
- 5 - Not Acceptable for Employment

(These ratings may be changed when information from work checks and police investigations warrant a change.)

The question to be answered, of course, is whether this interview technique is valid. Do applicants who have received an interview rating of 2 for a specific job subsequently perform in this manner when hired?

Procedure

The names of all service staff

employees hired within the past 18 months were obtained from payroll records. From this list were extracted those employees who had been interviewed and rated in the Personnel Office and who had been on the job at least three months. This procedure yielded a total N of 61.

Measures of job success against which the interview ratings were compared were obtained by having supervisors rate each of the subjects on four factors — Industry, Job Knowledge, Cooperation, and Attendance — and then assign an over-all rating of job performance as follows:

- 1 - Excellent Employee
- 2 - Above Average Employee
- 3 - Average Employee
- 4 - Below Average Employee
- 5 - Unsatisfactory Employee

Some of the employees included in the study had been terminated in which case a Termination Report requiring the same kind of rating described above was used.

While the relationships of the various factors on both the interview rating scale and the job performance rating scale need to be investigated, only the over-all interview rating and the over-all job performance rating were compared in this investigation.

Fortunately (for purposes of this study, at least!) some departments hired individuals without reference to the Personnel Office. Also there were times when seasonal demands for workers necessitated a lowering of our hiring standards. These circumstances made it possible to compare those with low interview ratings against job performance, as well as those with high interview ratings.

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Results

There are several ways to analyze the data obtained in this study. The usual procedure is to compute a product moment correlation coefficient between the two measures to determine their relationship.² The correlation between the interview ratings and job performance and the accompanying scatter plot are shown in Figure 1 below.

2. Joseph Tiffin, "Industrial Psychology," (Third Edition), pp. 515-524.

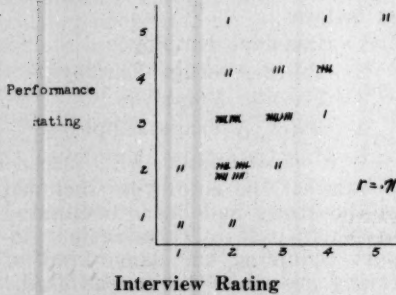


Figure 1. A scatter diagram showing the relationship between interview ratings and job performance ratings.

The correlation of .71 is very meaningful to those who have had experience in working with, and interpreting, such indices, but it is not very useful in discussing the results with a first-line supervisor or, for that matter, with any management official unfamiliar with this kind of measurement.

There is, however, a useful device called the expectancy chart which is very effective in communicating our results to people outside the Personnel Office and which can be obtained directly from the scatter diagram. Since it is the normal practice of the interviewers to refer only those applicants who receive an over-all rating of 1 or 2, the interviewers, as well as those who utilize their services, would be interested in knowing what proportion of those so rated will turn out to be above average employees, what proportion will be average, and what proportion will be below average or unsatisfactory employees. The expectancy chart (Figure 2) shows these proportions.

Conclusions

The magnitude of the correlation

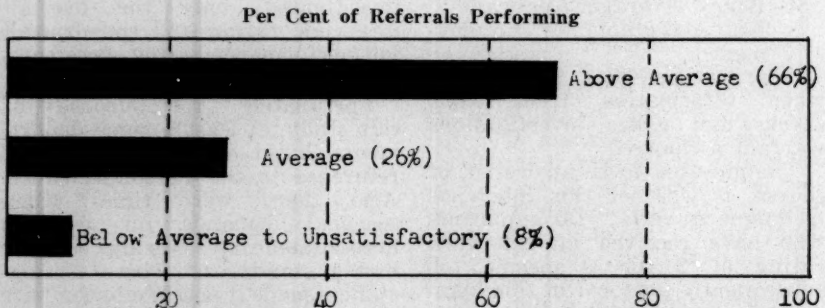


Figure 2. Expectancy chart showing proportion of referred applicants (receiving an interview rating of 2 or above) who were subsequently rated Above Average, Average, and Below Average to Unsatisfactory in job performance.

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coefficient, as well as the relationships shown in the expectancy charts, indicate that the systematic interview in use at Purdue is a reasonably valid technique for selecting service staff employees.

There was no attempt to establish the superiority of this particular interview method over any other. However, the findings in this study support the belief that the planned, systematic interview is the most likely to possess adequate validity.

An important by-product of this and similar studies is the

revelation of the glaring errors that will be made on occasion. Note, for example, the three cases in which individuals received interview ratings of 2 and job performance ratings of below average or unsatisfactory. The interviewer's job is not complete until he has made a review of these cases and thoroughly investigated the circumstances surrounding their lack of success on the job. Such reviews will usually indicate where in the interview he has erred and should result in more valid judgments.

ACADEMIC RESPECTABILITY . . .

(Continued from Page 23)

Psychology, Personnel Administration (for college and university), or Guidance. With these academic qualifications, coupled with internship experience in personnel work, the Personnel Director would find professional acceptance among faculty and administration, and without doubt the non-teaching staff. Having such competencies, the Personnel Director would be free to achieve the highest degree of personnel program designing, make effective utilization of personnel, encourage staff stability and promotional opportunity, and aid in the fulfillment of the prevailing institutional and educational philosophy. Certainly educational competence is of prime importance, with experiential background nearly its equal, if the Personnel Director is to attain acceptance in all quarters and elevate the status of college and university personnel administration as

a material force in the operation of an educational institution.

It is obvious that the challenge to the College and University Personnel Association and its members is to inculcate the importance of college and university Personnel Administration upon top level college and university administrators. Equally crucial is to insist upon Doctoral degree level leadership in order to gain the maximal educational effectiveness of human resources and achieve professional acceptance in the college and university setting.

The task is admittedly complex and not without conflict. However, to achieve the ideal, means stringent effort must be made to attain the aforementioned standards, precepts, and philosophy, if professional status is to be the goal of Personnel Administration in colleges and universities.

Organizing for Safety

JOHN MORRIS

"A safety program in a college, as in any other organization, has two main reasons for being: the desire of the college for freedom from financial loss and the desire for protection of the people under its charge from bodily harm. This can be said in other ways, but the substance of the matter is substantially the same."

The concern of American business for the health and safety of all employees is felt also by the colleges, with this difference — that the college family is composed not only of employees, but also of students and the general public. It is hardly logical that an institution with the several weighty responsibilities of a college should be without a vigorous safety policy and a continuing safety program.

On the side of economics, safety is unquestionably one of the activities which comes under the heading of "management improvement," as described by President John D. Millett of Miami University.¹ "No institution of higher education ever has all the funds it needs for academic and other salaries, the promotion of research, the purchase of books and equipment, the modernization of plant, the publication of desired literature, or the provision of services to students. Economies are absorbed as quickly

as they are achieved. In fact, the needs for additional income will grow more rapidly than economies in operation can be realized.

"This experience does not make management improvement unimportant. On the contrary, if management improvement is not taking place, there is no assurance that additional income will result in any additional educational service. New income may simply be absorbed in old performance." The safety program, as a phase of management improvement, can save the college many thousands through the prevention of loss to fires and costly accidents.

A College Safety Program

A college safety program consists of all those activities which are carried on with a view toward developing attitudes of safety and providing a safe environment for living, studying, research, work, and play, not only for the students, but also for the faculty and staff, and for the general public who come to the campus. In some larger institutions, one or more persons may be employed full time to direct or coordinate such safety activities. In others, there is no person so employed, but special

1. John D. Millett, "How the Management Consultant Can Help," *College and University Business*, Vol. 25, No. 4, (October, 1958) p. 42.

Mr. Morris is Safety Coordinator for the University of Illinois. Currently he is also serving as Vice Chairman of the Campus Safety Association.

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responsibilities in safety may be delegated to certain key persons. Finally, there are probably quite a few institutions where nothing is consciously done in the direction of safety, or safety activity is sporadic and uncoordinated.

There is certainly nothing stereotyped about the administration of safety in colleges. There are no two safety programs which are identical, even among those universities where safety is actively administered or directed by professionals. Common features of several of the better established programs are a broad assignment of responsibility to the safety director and direct top-level communication between the safety director and university management.

The Administrative Safety Committee

A third feature common to many college safety programs, and one which is basic to the establishment of a program, is the administrative safety committee for the college. This committee should be directly advisory to the administration in matters of policy, should include top-level management, and should be active enough to insure continuity and vigor in the program.

The safety committee, which is sometimes called the central safety committee to distinguish it from departmental safety committees, should be drawn from persons who already have an active interest, skill, or responsibility in safety. Such an administrative safety committee in a small medical college draws its members from supervisory persons in the School of Nursing, the Maintenance Department, the Physical Plant Department, the Housing Office, the

Personnel Department, and from the Medical School, which is currently represented by a Sanitarian. The Committee is appointed by the College Administrator and reports its deliberations to him. Acting on the advice of this committee, the administrator has ordered remodeling of buildings for improved fire safety (providing new stairways and additional exit doors), has achieved greater traffic safety through better street lighting, and has made other important permanent improvements to the college plant.

The question may be raised as to what is the function of an administrative safety committee. The one just described dealt with specific problems and made administrative decisions. This may be proper on a campus which has no career safety engineer; otherwise, these would be problems for him to resolve directly, and without reference to an administrative committee. Generally speaking, however, it is desirable for the safety engineer to have the support and advice of a committee in matters of policy, yet retaining the prerogative of administrative safety decisions.

A policy-making central safety committee in one university is composed of five faculty members, the personnel director, and a legal officer. Two of the faculty members have professional safety or safety education experience, one is a laboratory scientist, and another an architect.

With what types of questions does such a central safety committee concern itself? Here are some actual items selected from agenda for their meetings:

1. What control measures can be set up for improving driving attitudes of faculty using the col-

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lege vehicles?

2. Can the present college smoking regulations be relaxed in certain buildings?

3. What action should be taken to promote the installation of proper panic type hardware in the sports building?

4. Can the new laboratory building plans, calling for open stairways, be approved, or should standard enclosed stairways be required?

5. Should the college approve the proposed plans for the Army to demonstrate helicopter operations on the campus?

6. What steps need to be taken to provide auxiliary emergency power for the college hospital?

7. What should be done about stores of old explosives, complete with primer, stored in magazines belonging to the college?

8. What are the emergency exit conditions in the principal assembly hall on the campus, and is there need for auxiliary emergency lighting?

9. What should college policy be with regard to fire drills in dormitories and in other types of housing?

10. What is the correct policy for the college with regard to first aid cabinets in buildings?

11. Should not student accidents be reported, as well as employee accidents, and how can this best be done?

12. Should the use for classroom space of the third floor in building X be approved, since there is only one stairway and no other exit from this floor?

13. Should the college purchase boots with safety toes for those occupations requiring special footwear for occasional use?

14. What are the college standards for approval of off-

campus housing, and are these standards being met?

15. What are the hazards of the July 4th celebration held on the campus, and to what extent can these hazards be reduced or eliminated?

16. What should the policy be regarding classroom chairs? Are fixed chairs safer than movable chairs?

17. Should the college accommodate the English department in a request to close off a corridor and create badly needed office space?

18. Should a fume hood be vented out a window of a chemistry laboratory as a temporary expedient?

Use of College Staff

Special skills within the college are always available for the central safety committee. The insurance officer of the college necessarily maintains accurate records on the institution's loss experience through fires, industrial accidents, and public liability claims, and his special knowledge of these matters may be helpful. The security or police director has responsibilities in safety and might well be a member of the committee. The laboratory sciences should be represented, since a high standard of laboratory safety is vital to the college safety program. The Dean of Students might well be involved, because another important key to safety in the college environment lies in intelligent management of student activities.

Use of Outside Agencies

For the college or university conducting a safety program on a limited budget, and not yet ready to hire a safety specialist, there

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are usually available, for the asking, professional skills in safety in the community. One of these might be the Chief of the local Fire Department or Fire Prevention Bureau, who should be involved because of his special knowledge of fire prevention and fire safety. Another might be the safety engineer of the insurance company underwriting the protection of the college, because he is familiar with mechanics of safety programs and with special safety problem areas of the college. Help may also be requested from any large industrial plant in the area which has a working safety program, and from colleges and universities in the region, one or more of whom is likely to have some sort of safety organization.

Other Information Sources

The college faced with the need to establish safety policy should rally its own experts and assemble its own technical library in the safety area. Basic information on safety in colleges is available from the National Safety Council and its affiliate, the Campus Safety Association. The Association and the Council jointly put out the "College and University Safety Newsletter" and promote the purposes of the Association through the materials of the Council, through direct correspondence with interested colleges, and in two meetings annually. The October meeting coincides with the National Safety Congress and is a part of the School and College sessions. The Spring meeting is held on a host campus.² The first such meet-

ing, held at the University of Illinois in 1954, was followed by similar conferences at Minnesota, Massachusetts Institute of Technology, Purdue, and California Institute of Technology.

The "Accident Prevention Manual for Industrial Operations," published by the National Safety Council, is the most complete mass of operational safety information in a single volume. Also available from the same source is special information on many topics, including the several safety monographs for colleges and universities which the Council has published during the last few years, some of which are still obtainable. Other good materials include the transactions of the School and College Section of the National Safety Congress.

Fire protection is the special field of the National Fire Protection Association. Their National Fire Codes are extremely valuable references in fire protection. Every college and university should have, and be guided by, the Building Exits Code, NFPA 101, which is a complete standard of safety to life in buildings, including places of assembly, residence halls, fraternities, and rooming houses. A college should hold memberships in both the National Safety Council (and in its affiliate, the Campus Safety Association), and the National Fire Protection Association.

Summary

The expenses involved in all these services and activities are negligible, and the benefits accruing from the type of program described may be considerable. *No college can afford to be without a directed safety effort.*

2. The 1959 meeting will be April 27-29 at Michigan State University, East Lansing, Michigan and is the Sixth National Conference on Campus Safety.

A Hospital and Medical Care Program as Developed by Duke University

The following material describes, in some detail, a plan of hospital and medical care, which is being offered, on a participating basis, to certain members of the faculty and staff of Duke University. It is reported by Walter G. Cooper, Personnel Director, Duke University, as an informational service of THE JOURNAL.

The Program

The program of hospital and medical care at Duke University is composed of four elements: (1) hospital care; (2) surgical benefits; (3) medical benefits; and (4) out-patient care. The first three elements will be included under comprehensive policies written by the Hospital Care Association (Blue Cross). Out-patient care will be financed from a fund to be administered by Hospital Care on a cost-plus basis. The insured must carry the above hospital insurance in order to be eligible for surgical and medical benefits. With minor exceptions, medical benefits are payable only when the insured is hospitalized.

The above four elements are combined into a single package, or unit, which will be offered to all eligible employees of the University who wish to participate in the program. This plan is an expansion of the existing Group Hospital Care program, and will provide a uniform basis for University participation in the cost, and it is believed will provide adequate minimum coverage for all participants in the plan.

Participation

Participation is voluntary.

Eligibility

The date for determining eligibility of all participants shall be September 1 of each year.

Subject to the provisions of the program with the Hospital Care Association, the following full-time employees of Duke University will be eligible to participate, provided such employee files with the Treasurer of Duke University an application and an authorization for the required payroll deduction:

Officers of Duke University.

Full-time members of the faculty with the rank of Instructor (in Medicine, Associate) or above.

Administrative employees with the rank of Director, Manager or above.

Professional members of the Library staff who are eligible for, and actually participating in, TIAA.

In addition to those listed above, the following employees who have been in the full-time service of Duke University for five years shall also be eligible:

Clerical, secretarial and technical employees who are on the payroll designated as "Secretary and Clerical Payroll".

Skilled laborers engaged in the operation and maintenance activi-

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ties of the University.

Any persons in the above categories paid from funds other than the usual funds of Duke University (i.e., government contracts, training grants, private sources, clinics, etc.) shall be eligible only if the funds required to pay the contribution toward the premium are available and useable for this purpose. Evidence in writing of the permission to use such funds may be required. Persons otherwise eligible, however, may join the group entirely at their own expense.

Extent of Participation By Duke University

Married persons who are, in fact, the head of a family with one or more dependents will be entitled to participate on the basis of the family or two-person membership, as the case may be. Single persons will be eligible to participate on the basis of a single person rate and contribution. Eligible married women, whose husbands are not employed by the University, or, if employed, are not eligible under the regulations, may subscribe on either the single or the family basis, provided, however, the contribution of the University will be limited to the single person rate.

Hospital Care

To cover the costs of hospitalization, all participants in the program will subscribe to, and carry, the \$10.00 Comprehensive policy of the Hospital Care Association. Any who desire the \$12.00 Comprehensive policy may have it by paying the additional cost, which is 35 cents per month for a single person and 95 cents for a family. He may also have the polio and

dread diseases coverage at an additional cost of \$2.00 per year for a single person and \$5.00 per year for a family.

Benefits. The benefits will be those described in detail in the certificate issued to each participant by the Hospital Care Association. In general the certificate provides 70 days (30 days for polio and psychiatric cases) of hospitalization per year per member for each specific type of illness. In amount, the benefits cover the full cost of a ward bed in a Member Hospital or \$10.00 per day (\$12.00 per day for the \$12.00 certificate) toward the cost of bed and board in a semi-private or private room. In addition, they cover most of the other charges usually incurred during hospitalization. The principal items not covered are special nursing care, X-ray therapy, and blood for transfusions. (See coverage of X-ray therapy under medical benefits.) Outside of North Carolina, benefits up to 70 days are available in accordance with the benefits of the Blue Cross plan serving the area.

For the few hospitals, such as Duke Hospital, which charge comprehensive rates to include practically all hospital charges, this policy allows an extra \$11.00 per day above bed and board for the first 6 days and \$6.00 per day for the next 64 days. For its lowest priced private room, Duke Hospital charges faculty members \$27.00 per day for the first 6 days and \$19.00 per day thereafter. For such a room, during the first 6 days, this policy will leave \$6.00 per day to be paid by the insured; (\$4.00 for the \$12.00 policy) therefore it will leave \$3.00 per day to be paid by the insured (\$1.00 for the \$2.00 policy). Rates are subject to change.

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For those who enroll during the initial enrollment period, no physical examination is required, pre-existing conditions are covered, and benefits are available for admission occurring on and after the effective date of the certificate. There is no waiting period for maternity, tonsil, adenoid or other cases. Maternity and obstetrical care, however, is available only under family memberships.

Surgical Care

Benefits. This policy provides benefits for each surgical procedure according to the \$200 surgical schedule set forth in the policy. The Surgical Private Diagnostic Clinic connected with Duke Hospital has agreed to accept these benefits in full payment for services rendered by its members to participants in this program.

For services elsewhere, Hospital Care will pay in accordance with the above schedule; and, if the charges are greater than the prescribed benefits, the insured will be responsible for the difference.

Medical Care in Hospital

The special Medical Rider is issued in conjunction with the hospitalization policies and is subject to the rules and regulations of the certificate to which it is attached.

Benefits. Benefits are paid for hospitalized illnesses only and are as follows: for the first day of admission, up to \$10.00; for each of the next three days, up to \$6.00; for each of the next 66 days, up to \$4.00. Medical benefits are not payable for surgical or maternity cases, both of which are covered by the surgical policy. If both medical and surgical services are

required on the same admission, only 75 per cent of the medical and 75 per cent of the surgical benefits are payable. The Special Medical Rider provides a schedule of benefits to cover X-ray therapy for cases of proven malignancy. These benefits are payable for both hospitalized and ambulatory cases.

The Medical Private Diagnostic Clinic connected with Duke Hospital has agreed that it will accept these benefits in full payment for services rendered by its members to participants in this program. For services elsewhere, Hospital Care will pay according to the above schedule; if total charges exceed those amounts, the certificate holder will be responsible for the difference.

Out-Patient Care

To supplement the above benefits and complete the program, the plan provides a limited amount of care for ambulatory, out-patient cases. The purpose of this plan is to cover a major part of the costs of diagnosis and therapy for out-patient, ambulatory cases in which such diagnosis and therapy cannot be provided by routine home calls and office visits. No home calls are covered by this plan, and office calls are covered only when they are integral parts of a series of examinations or therapy. The plan will be administered by the Hospital Care Association on a basis of cost, plus 10 per cent.

1. Services

(a) *At Duke facilities.* The plan will cover two types of services at the Surgical and Medical, Private Diagnostic Clinics associated with Duke Hospital as follows:

Professional services. Partici-

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pants may request the services of any physician on part-time practice at the Duke Hospital. However, it is not possible to guarantee an appointment with such a physician without adequate notice. No physician is obligated to accept any patient against his (the physician's) wishes.

Laboratory and X-ray services of the Duke Hospital. These facilities make the tests required in the diagnosis and give the therapy which they are equipped to give to the extent that it is indicated by the diagnosis or requested by the patient's personal physician. Therapy covered by this plan includes those types of X-ray therapy not covered by the Special Medical Rider.

(b) *At outside facilities.* Participants in the plan have complete freedom of choice of facilities and may choose a physician, clinic, or laboratory not connected with Duke if they wish. Professional and laboratory services obtained from such outside facilities will be paid for according to the schedule of charges which prevails or would have prevailed as described below for this use at the Duke facilities. If such payments do not cover the entire charge, the participant will be responsible for the difference.

2. *Fee Schedule.* A general schedule of fees for professional services has been prepared by the Duke Private Clinics and supplied to the Committee. The rates in that schedule are substantially below the levels ordinarily charged to medium-income families and are applicable only to employees of Duke University. Charges for special procedures, such as gastroscopy, biopsy, skin tests, etc. will be at the rates allowed by Hospital Care under its \$200.00 Schedule. Charges for procedures

not covered by either of the above schedules will be determined by Hospital Care. Charges for laboratory tests performed in the P.D.C. laboratories will be at the regular rates less 50 per cent. The above offer does not, however, constitute a contract between the professional members of the Clinics and the remainder of Duke University.

3. *Coverage.* If as many as 75 per cent or more of all eligible employees of Duke University enroll in the plan, all participants will be covered without physical examination and without the exclusion of pre-existing conditions, subject to the rules of the Hospital Care Association.

4. *Exclusions.* The following types of cases and services are NOT covered by this plan:

Service-connected cases which are eligible for treatment in government-operated facilities;

Cases covered by Workmen's Compensation laws;

Accident cases covered by other insurance;

Routine periodical physical examination;

Normal pre-natal care in obstetrical cases;

Normal pediatric care for children;

Home calls;

Routine immunizations;

Eye refractions;

Dental care;

Cosmetic surgery;

Drugs, dressings and prosthetic appliances;

Psychiatric care and guidance (one initial diagnostic examination shall be covered, however).

5. *Benefits.* Until some experience is gained in the operation of the plan, it is desirable to include an element of co-insurance in the plan in order to reduce the costs and risks involved. Therefore,

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any participant who receives outpatient services covered by this plan will pay the first \$5.00 of charges connected with any single illness or series of treatments and 20 per cent of the next \$50.00 of such charges. Above \$55.00, the fund will pay the entire charges up to a maximum total charge of \$200.00. For this purpose any charges incurred within a period of six months on account of any examination, diagnosis, re-examination, and/or treatment of any single ailment or condition will be construed to be "charges connected

arbitrary estimate of 75 cents per month for single persons and \$1.25 per month for families is being used for the first year. It will be necessary to re-examine the charges, benefits, and exclusions each year to keep the fund solvent and with a view to increasing benefits and removing some of the exclusions if that seems to be feasible and desirable.

Financing The Program

The monthly charges necessary to finance the whole program are shown in Table 1.

TABLE 1
Monthly Charges Necessary To Finance Program

	One Person	One Parent and One Child	Family (Female Employee)	Family (Male Employee)
Hospitalization.....	\$2.55	\$5.10	\$ 6.60	\$ 6.60
Surgical benefits.....	.70	1.40	2.20	2.20
Medical benefits.....	.45	.90	1.00	1.00
Out-patient care.....	.75	1.25	1.25	1.25
Total.....	\$4.45	\$8.65	\$11.05	\$11.05
Payment by University.....	\$2.25	\$4.35	\$ 2.25	\$ 5.55
Payment by insured.....	\$2.20	\$4.30	\$ 8.80	\$ 5.50

Additional charge for \$12 plan: Single, 35¢; Parent and one child, 70¢; and Family, 95¢; to be paid by insured if desired.

with any single illness or series of treatments". If the charges are incurred at any of the Duke facilities, the participant will be billed for his part of the charges, and the bill for the remainder will be sent to Hospital Care Association to be charged against the fund. If the charges are incurred elsewhere, the participant will pay the entire bill and request Hospital Care to reimburse him for the amount to which he is entitled.

6. Costs. There is no adequate experience on which to base the charges for these benefits. An

It should be pointed out that when an employee becomes eligible for participation in the contributory plan, automatically, he no longer qualifies for the staff rate when admitted to Duke Hospital. This is true whether he joins the contributory plan group or not.

Termination of Contributions

Duke University will continue contributions for premiums for each participant on a month-to-month basis until the happening of any of the following events:

Termination of such partici-

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pant's employment by Duke University; (1) upon retirement at normal retirement age or earlier; (2) otherwise than by retirement.

Discontinuance of the plan or pursuant to action taken by the Board of Trustees of Duke University.

In the event of termination of employment, the participant will have the privilege of converting his coverage under the regulations of the Hospital Care Association to a certificate limited to hospital and surgical coverage at individual or non-group rates. Furthermore, if a faculty member's employment is terminated by death, the surviving spouse may similarly convert to a hospital and surgical non-group coverage at the then prevailing rates for that type of coverage.

Right To Modify

While it is expected that this plan¹ will continue indefinitely, Duke University reserves the right to discontinue or modify it at any time. Further, since the coverage designated as out-patient care is experimental, with no experience to serve as a basis for fixing rates, this phase of the coverage has been limited to the last six months of the academic year 1956-57 and the academic year 1957-58, during which time the entire plan will be reviewed in order to determine whether it is feasible and can be continued.

1. Approved and adopted by Resolution of the Executive Committee of the Board of Trustees, Duke University, November 28, 1956, to become effective January 1, 1957 and remain in effect for a minimum period of 18 months.

OXFORD, OHIO, like its namesake, Oxford, England, has long been known as a pleasant college town.

Located 35 miles northwest of Cincinnati, on a gentle hill, the township of Oxford was ceded to the State of Ohio by Congress in 1803 to be held in trust for the "endowment of an academy and other seminaries of learning." Miami University was established in 1809, being the second oldest state institution of higher learning west of the Allegheny Mountains. A grammar school was established in 1818, and in November, 1824, the college was opened, the first class including 12 members.

Miami's original campus consisted of "plain, old-fashioned structures set in a 60-acre field shaded by natural forests."

The Miami of today is a modern university of approximately 5,800 students. It owns and utilizes 1,100 acres of land, together with more than 50 buildings of harmonious Georgian architecture. Throughout the campus there is a profusion of shrubbery and fine old trees, presenting a beautiful and diversified landscape.

Miami has a College of Arts and Science and Schools of Education, Business Administration, and Fine Arts. A graduate school offers study for the Master's degree. Navy ROTC and Air ROTC programs are also available.

Reporting and Recording of Employee Absences

MAX M. SAPPENFIELD

"Personnel data have two distinct uses. The first is obviously the day-to-day uses which are made of such data. The second is equally necessary in maintaining and appraising the practices and policies of the personnel program. This discussion of the reporting and recording of attendance or absences attempts to keep in mind these two uses."

Introduction

The reporting and recording of attendance or absences has an obvious day-to-day use in connection with payroll preparation. Records of this sort make possible the appraisal of the agency's practices and programs relative to sick leave policies, vacation, and the like. Because of each of these uses, the forms and procedures for reporting and recording should be built to produce the necessary data easily and to facilitate their recording. The end result should be records which not only produce the desired data when needed, but also should be of a character which make their use physically easy.

The Reporting of Attendance

It is the desire of every employer that his employees be on the job every day and hour that work is to be performed. It is equally the desire of each employee that he be able to be at work each day expect-

ed by the employer. Regardless of this desire on the part of both the employer and the employee, it is also equally well recognized that this Utopian situation cannot, and will not, continue over a very long period at any one time. Part of the failure to attain this Utopian situation is due to the frailty of the human body. Other failures come about because of the fact that the employee may not place as high a premium on perfect attendance as the employer wishes he would, and sometimes it may be due to the fact that the employee does not enjoy his job. Without going into the causes of absences further, it is granted that there will be absences from the job. The fact that the employee is not able to be at work on certain days must be recorded. Attendance and punctuality are important in considering individual employees for promotion, and they may play an important part in determining seniority rights at the time of layoffs, as well as having a very direct bearing upon the amount an individual employee is to receive for the work performed during a specific pay period.

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There is no argument concerning the point that attendance must be recorded. Without it the supervisor cannot prepare his payroll information. Without such reports the payroll unit cannot prepare accurate payrolls. It can be assumed that the supervisor is keeping an attendance record. The only question left is how best to do it.

To the supervisor, attendance seems to be the more important. He records the fact, therefore, that on October 17 all his employees are present and working. If one or more is not working, he also records that fact. Because it is assumed that the bulk of the employees will be present each day, and that only those will be absent because they have to be, it is often thought that the easiest way to record these data is to record only the absences because they are fewer.

Recording of Absences Not Sufficient

Let us look at this idea a little more closely. It is true that for payroll purposes, for the calculation of seniority, and for the determination of attendance and punctuality, the deviations from normal—that is, absences—are the important facts. Making a record of these deviations is then done with a negative approach. This is quite adequate in the most simple situation where all employees are expected to work from 8 to 5, Monday through Friday. But what about deviations from this rule other than absences. How do you record the deviation of overtime? This is a positive item and not a negative one as absence is. How do you record an absence from the job because the employee is attending to duties assigned to him

to perform at a location other than normal? In the future, a look at such a negative record would indicate that the person was on the job. But what if an injury befalls the employee while he is performing duties assigned at another location? Would the records of the supervisor indicate where he was and why he was there? The point is that under the simplest of situations, the reporting of absences alone is sufficient, but that if the record is to be complete, the mere recording of absences is not sufficient; nor will such a record tell the whole story.

Attendance on the job or in the classroom is conceded to be important. It can be assumed that the supervisor of a group of employees will keep his records so as to reflect both attendance and the deviations from attendance which normally are absences. At the end of the reporting period—whether it be a week, a two weeks' period, or a calendar month—the next requirement of the supervisor is the reporting of the deviations to a central agency. This would appear to require a separate report—and often does. To shorten this procedure, the obvious answer is to devise a form of recording which will meet both needs in one act.

Proposed Attendance Report Form

My proposal to this is that we devise a form upon which the supervisor can keep his daily record of attendance and at the same time provide him with a method of reporting his record to the central agency for recording. The proposed form is shown in Figure 1. (page 40). The make-up of this form is simple. A blank is provided to indicate the attendance of each employee on each calendar

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Personnel Form No.

ATTENDANCE REPORT

(Figure 1)

REPORTING UNIT

Name _____

Month of _____ 1958

Signature of Reporter

Days of the Month

Notes

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Symbols to be used

	Present
P	Scheduled time off
O	Absent - without pay
A	Absent - illness
S	Absent - vacation
V	

F	Absent because of death in family
W	Absent because of compensable injury
AP	Absent - with pay
M	Absent - military duty
CO	Absent with pay - compensating overtime

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day of the pay period; in this case, the pay period is assumed to be one calendar month. The form can easily be adapted to shorter pay periods by decreasing the number of calendar days covered. The information for each employee would be indicated by employing the use of appropriate symbols. A suggested list of symbols is as follows: (The key to these symbols should appear on every sheet.)

- P present
- O scheduled time off
- A absent without pay
- S absent because of illness
- V absent because of vacation
- F absent because of death in the family
- W absent because of compensable injury
- AP absent but with pay
- M absent but on military duty
- CO absent because of compensating overtime

Most of these symbols will be sufficient in themselves to tell the story. In those cases where the symbol alone is not sufficient, a "remarks column" is provided in which the supervisor can supply the needed data. For example, it is often customary to provide differing amounts of "funeral" leave depending upon the degree of relationship between the employee and the deceased person. This relationship should be included in the "notes" column. When the symbol "AP" is used, the supervisor might wish to record why the absence was not considered deductible. Examples might be, attendance at a meeting to negotiate a new labor agreement; attendance at a training session, either on the campus or away; attendance at a committee meeting off campus; jury duty, and the like. Also, provision is sometimes made for

charging an absence for care for a sick member of the family to the employee's own sick leave, even though the employee is not also ill. This deviation might well be recorded in the "notes" column. The recording of attendance for partial days is often a problem. An employee may be ill in the morning but work in the afternoon. An employee may work in the morning but be scheduled "off" in the afternoon. It is suggested that these facts be recorded in the following way: S/P and P/O. Fractions of days, other than halves, could be recorded in the same way with additional notes to indicate fourths or eighths.

In using this form, it is assumed that the supervisor, or his representative, will make the entries each day. At the end of the pay period, he has a complete record. It is proposed, further, that this record be kept in duplicate. This is easily arranged by having the record form padded and a different color used for the duplicate copy.

The supervisor now has all the data he needs concerning the daily attendance of his employees, as well as a record from which to make his report at the end of the pay period to the central agency where the individual record of the employee may be posted and the necessary data given to the payroll unit relative to attendance or absences.

As has been indicated above, the central agency is primarily interested in the deviations from normal, which is assumed to be perfect attendance. Also, because the deviations are normally fewer in number than the number of persons who have no deviations, it is common for the supervisor to be asked to report only the deviations. But how does he do it? He takes

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his attendance sheets and picks out the cases of deviations and makes up a report of them to send to the central agency.

The use of the proposed form makes unnecessary this report. Instead of making up another, he sends to the central agency one of the copies of his report of attendance.

This method has the obvious advantage of removing from the supervisor the need for making up an additional report. It may appear to have the disadvantage of giving to the central agency the necessity of making up his report for him. This is not entirely true, as we shall see below when the method of posting this information on the individual record of the employee is discussed. It may also appear to have the disadvantage of providing the central agency with data it does not need and increasing unnecessarily the bulk of the reports it receives. This supposed disadvantage, I believe, can be shown to be an advantage because of the possible use to be made of the complete record.

The record has now been made and is ready to be transmitted to the central agency for recording.

Recording in the Central Agency

The posting of attendance records by the central agency should be made rapidly and accurately. If these records are to be useful for current operations, they must be up-to-date. If they are to be used in connection with the payroll, they must be done rapidly, because the amount of time left to the payroll unit for preparation is usually short. As a consequence, the devising of the posting method must be done with these factors in mind.

The kinds of cumulative records used by colleges and industry are probably as numerous as there are different locations, and much ingenuity has been used in devising them. It appears desirable that these records possess certain fundamental characteristics. They should be easily handled. They should be easily filed. They should be small in bulk, because they become a part of the permanent records of the agency, and the problems of future filing space must not be overlooked. They should show at a glance, if possible, the record of the individual employee as to attendance, available balances of sick and vacation credit, and the like.

The size of the cumulative record may well be governed by the experience of the agency as to the longevity of its employees. If the turnover is rapid, and few employees stay for prolonged periods, then the provision for posting the record of a number of years in one place is of little importance. If just the opposite is true, provision should be made to reflect the history of several years. Each agency must decide this point in the light of its own experience.

The form used by the author provides for six years. At previous times, he has used a smaller form successfully which provided for only four years. The six-year form will prove adequate for a large number of employees and can be easily extended by adding a new card when the employee enters his seventh year. The record of an employee working for the college a lifetime will consume a total of seven or perhaps eight cards. The number of these with extreme longevity will usually be small enough not to create a filing problem.

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PERSONNEL OFFICE FORM 10 3-58

Figure 2

NAME	CLASS	APPT. DATE																					
		YEAR						YEAR															
		S	T	V	T	F	I	C	O	P	A	A	S	T	V	T	F	I	C	O	P	A	A
J																							
A																							
S																							
O																							
N																							
D																							
J																							
F																							
M																							
A																							
M																							
J																							

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The form itself is simple. (See Figure 2, page 43.) Since it is not necessary to record anything except the total of the deviation by months, the card has a block for each month of a calendar year. For ease of posting, the block has been broken up into small blocks indicating the type of deviation. The same symbols are used for these smaller blocks as were used on the attendance report. For example, if the fact is being posted that Joe Doakes was absent during the month of January for three days because of illness, a figure "3" would be placed opposite January in the column headed "S".

The cards should be arranged in the file so that they correspond with the order of the names of the employees on the attendance record. This is rather important, because if the record cards of all the employees are arranged in an over-all alphabetical file, the posting clerk will spend a great deal of time jumping back and forth in the file. Furthermore, if the cards are arranged by work units, it is possible for the poster to remove all the cards from the file of the unit she is working on, and post that unit, and then return the cards to the file. This also makes it possible for several different clerks to help with the posting if needed. The only disadvantage to this method of filing is that before a name can be located, the clerk must know the unit for which the employee is working. This is not a disadvantage, because the questions arising, which make the consultation of this file necessary, ordinarily attach to an employee, his class, or place of employment, which information accompanies

the inquiry.

This card is designed for a monthly pay period, but may easily be adapted to a semi-monthly pay period by using the method suggested for recording partial days. In other words, the recording of one sick day for the first half of January and one in the second half of January would appear like this on the card: 1/1.

Besides the advantage of posting mentioned above, the arranging of the cards by work units has an advantage for research purposes. The attendance record of the employees of a specific work unit can be compiled easily without the necessity of searching out the cards of the employees concerned and segregating them for study.

When an employee separates from the service, his card is pulled from the active file and placed with his permanent record material. If he re-applies, his attendance record is immediately available to the interviewer. If he is re-employed, the old card — rather than a new one — is used again; thus his complete attendance record is always available.

Conclusions

During the past several years, the author has experimented with a number of different ways to accomplish the reporting and recording of absences and attendance. His experience leads him to believe that the methods outlined in this article are the best which he has used. That does not mean that further developments or refinements cannot be made; in fact, he is sure that there is considerable opportunity for improvement.